



# SEQUENCE LISTING

<110> KIEFFER, TIMOTHY J.  
CHEUNG, ANTHONY T.

<120> COMPOSITIONS AND METHODS FOR REGULATED PROTEIN  
EXPRESSION IN GUT

<130> 029996/012 8307

<140> PCT/IB 01/00722

<141> 2001-03-12

<160> 18

<170> PatentIn Ver. 2.1

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

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| agacaggagt | gacttgccca  | cggacgcaca | gcaagttggc | aggtggagtt | cagctgtgcc | 960  |
| accttctgaa | gccgggtacc  | ctttacagcc | accagataca | agcgggatat | agacagctga | 1020 |
| tggagaagct | ggaggtgggg  | ggcgggaccc | cgaaggtggg | gaaagggcgc | gggggggcgg | 1080 |
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 20 25 30  
 Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe  
 35 40 45  
 Phe Tyr Thr Pro Lys Thr Arg Arg Glu Ala Glu Asp Leu Gln Val Gly  
 50 55 60  
 Gln Val Glu Leu Gly Gly Gly Pro Gly Ala Gly Ser Leu Gln Pro Leu  
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 Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr  
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 Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro  
       50                    55                    60  
 Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala  
       65                    70                    75                    80  
 Val Tyr Gln Gln Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln  
           85                    90                    95  
 Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala  
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Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu  
 115 120 125

Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val  
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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Ala | Ala | Gly | Leu | Leu | Arg | Leu | Glu | Thr | Pro | Ser | Gln | Leu | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asn | Pro | Lys | Ala | Met | Asn | Ser | Gly | Val | Cys | Leu | Cys | Val | Leu | Met |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |

Ala Val Leu Ala Ala Gly Ala Leu Thr Gln Pro Val Pro Pro Ala Asp  
35 40 45

Pro Ala Gly Ser Gly Leu Gln Arg Ala Glu Glu Ala Pro Arg Arg Gln  
50 55 60

Leu Arg Val Ser Gln Arg Thr Asp Gly Glu Ser Arg Ala His Leu Gly  
65 70 75 80

Ala Leu Leu Ala Arg Tyr Ile Gln Gln Ala Arg Lys Ala Pro Ser Gly  
85 90 95

Arg Met Ser Ile Val Lys Asn Leu Gln Asn Leu Asp Pro Ser His Arg  
100 105 110

Ile Ser Asp Arg Asp Tyr Met Gly Trp Met Asp Phe Gly Arg Arg Ser  
115 120 125

Ala Glu Glu Tyr Glu Tyr Pro Ser  
130 135

<210> 14  
<211> 685  
<212> DNA  
<213> Homo sapiens

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gccatgaaca gcggcggtgtg cctgtgctgt ctgatggcgg tactggcggc tggcgccctg 120  
acgcagccgg tgccctccgc agatcccgcg ggctccgggc tgcagcgggc agaggaggcg 180  
ccccgtaggc agctgagggt atcgagaga acggatggcg agtcccgagc gcacctgggc 240  
gccctgctgg caagatacat ccagcaggcc cggaaagctc cttctggacg aatgtccatc 300  
gttaagaacc tgcagaacct ggaccccgag cacaggataa gtgaccggga ctacatgggc 360  
tggatggatt ttggccgtcg cagtgcgag gagtatgagt accctccta gaggaccag 420  
ccgccatcag cccaacggga agcaacctcc caaccagag gaggcagaat aagaaaacaa 480  
tcacactcat aactcattgt ctgtggagtt tgacattgta tgtatctatt tattaagtgc 540  
tcaatgtgaa aaatgtgtct gtaagattgt ccagtgcac cacacacctc accagaattg 600  
tgcaaatgga agacaaaatg tttcttcat ctgtgactcc tggctgaaa atgttggtat 660  
gctattaaag tgatttcatt ctgcc 685

<210> 15  
 <211> 1362  
 <212> DNA  
 <213> Rattus sp.

<400> 15  
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 ctacaacctg agctgtgtca tggggggggg gggaatcacc cacagcattt aatctgctgc 120  
 tgttttaaac acgttgcttc taagtaaaga gaccgctaga gccacaacca ggaacctaac 180  
 tgctgctggc atcacttgcc ttttcatagt ctccctcagc cggaaccccc ccacgctggg 240  
 tgccttctct atttagaaag agtttctaag cctttctcct tcaccctaga ctggcaaggt 300  
 tgagggtagg ctgagggttg caagactgtg agaaaaggga gcccctctct tcttcttgct 360  
 cggtgagtat ctgagccaag atcctcacca cccagtggaa tcccgtaact ctagaggaaa 420  
 ggaagaactc tagaggacgg gaagatcatt gcaagctccc ctagatgtgc gagcccagcc 480  
 cgctccactc agccagccag agcttgaggg tgcttgagac actctctggc gccacttcgc 540  
 gaccaaatac atcggtagat gtaggctggt gagaagtcac cttgggaaga aatggaaacc 600  
 ttttcccaa aggttttccg cacaaaaggc aagagctgca cccaggatct taaaattctg 660  
 taagacgaga atccacgagg ccaactgtga ttgagttctg aaaaattgag agccctactc 720  
 ccctctctca cttgtgggag cccactcagg tctgaagtgc tcccagagaa catgccagaa 780  
 ttacatttgc tgacacctag tctgtgaggg tcccccggtt tcttgggaagg atttgatccc 840  
 tcaaagctca ctaaacagtg gtcagcttct ccattccaga caaactcctg cttctctccg 900  
 ggagtagggg tggcaccctc cctgaagagg actcagcaga ggcaccgaac aggggtgggga 960  
 ggaaagctgt ttagataaag aggaggactc atacaaagta ccccgctggg gaggggctat 1020  
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 gtggctgcct ctgagcacgt gtcctgccgg actgcgtcag cactgggtaa acagatgact 1140  
 ggctgcgtac cgggcggggc tatttaagag gagtcgccct gccgcctgcc ctcaacttag 1200  
 ctggacagca gccgttggaa accgccaagc cagctgactc cgcacccgaa ggtaagtggc 1260  
 tggcagatcc aagaatcatg agtgtgaaga actggcctgt agctttgcat ctattgccgt 1320  
 ttagtctttc cattttctgt gccttccctc acttgacagc tg 1362

<210> 16  
 <211> 217  
 <212> PRT  
 <213> Homo sapiens

<400> 16  
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 Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu  
 20 25 30

Ser Arg Pro Phe Asp Asn Ala Met Leu Arg Ala His Arg Leu His Gln  
 35 40 45  
 Leu Ala Phe Asp Thr Tyr Gln Glu Phe Glu Glu Ala Tyr Ile Pro Lys  
 50 55 60  
 Glu Gln Lys Tyr Ser Phe Leu Gln Asn Pro Gln Thr Ser Leu Cys Phe  
 65 70 75 80  
 Ser Glu Ser Ile Pro Thr Pro Ser Asn Arg Glu Glu Thr Gln Gln Lys  
 85 90 95  
 Ser Asn Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln Ser Trp  
 100 105 110  
 Leu Glu Pro Val Gln Phe Leu Arg Ser Val Phe Ala Asn Ser Leu Val  
 115 120 125  
 Tyr Gly Ala Ser Asp Ser Asn Val Tyr Asp Leu Leu Lys Asp Leu Glu  
 130 135 140  
 Glu Gly Ile Gln Thr Leu Met Gly Arg Leu Glu Asp Gly Ser Pro Arg  
 145 150 155 160  
 Thr Gly Gln Ile Phe Lys Gln Thr Tyr Ser Lys Phe Asp Thr Asn Ser  
 165 170 175  
 His Asn Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe  
 180 185 190  
 Arg Lys Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile Val Gln Cys  
 195 200 205  
 Arg Ser Val Glu Gly Ser Cys Gly Phe  
 210 215

<210> 17  
 <211> 799  
 <212> DNA  
 <213> Homo sapiens

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 cccaaccatt cccttatcca ggcccttttg caacgctatg ctccgcgccc atcgtctgca 180  
 ccagctggcc tttgacacct accaggagtt tgaagaagcc tatatcccaa aggaacagaa 240  
 gtattcattc ctgcagaacc ccagacctc cctctgtttc tcagagtcta ttccgacacc 300  
 ctccaacagg gaggaaacac aacagaaatc caacctagag ctgctccgca tctccctgct 360  
 gctcatccag tcgtggctgg agcccgtgca gttcctcagg agtgtcttcg ccaacagcct 420  
 ggtgtacggc gcctctgaca gcaacgtcta tgacctccta aaggacctag aggaaggcat 480  
 ccaaacgctg atgggggaggc tggaagatgg cagcccccg actgggcaga tcttcaagca 540  
 gacctacagc aagttcgaca caaactcaca caacgatgac gcaactactca agaactacgg 600  
 gctgctctac tgcttcagga aggacatgga caaggctcag acattcctgc gcacgtgca 660  
 gtgccgctct gtggaggagg gctgtggctt ctagctgccc ggggtggcatc cctgtgacct 720  
 ctccccagtg cctctcctgg ccctggaagt tgccactcca gtgcccacca gccttgtcct 780  
 aataaaatta agttgcatc 799

<210> 18  
 <211> 1167  
 <212> DNA  
 <213> Rattus sp.

<400> 18  
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 taaatcgtta tatggacctc ctaaggatgt aacaactggg agcatgctta cctagcatgt 120  
 ccgaaacccg gagttcagtc cctagcactg cacaatctca gtcccttatga agtagaggga 180  
 agatcagagg ttcaaggaca acatcaattt gagaccagcc tgggctactt accaaagaaa 240  
 gaaagagaga aataaataaa tagatagata aataaataaa taagtaaata aatatcttat 300  
 ggctggagag ttggttcagt gtttaagagc acttattgtg gggttgggga tttatctcag 360  
 tggtagagcg tttgcctagg aagctcaagg ccctgggttc ggtccccagc tccggaaaca 420  
 aaacaaaaca aaacaaaac aaacaaaaca acaaaaaacc ctgtctggaa aacacctaaa 480  
 taaagatata tatatataat atatatacat ataatatata tatgatatat atatatatat 540  
 atatctttgt ggaggaagct atacctttct ttcttgagcc tccaacacat aaatgtgccc 600  
 tgtcatccca ttcattattgc cccaagtggg aaacctatgt actataaact ctaagttcct 660  
 agtcactagg aactctcaag acacctacct caggcagcat cacttccgga gtgccaccat 720  
 tatcagttaa catccacatc tgggattcag atcccagatc ccttctgttc cctcagaagt 780  
 cacctacagc tttgtggggg tgcccccttc ctcagagagt gccacccgag ttgacctca 840  
 ccaaggcaac cctttgtacc cacagaatcc aacaggaagt agggggaaga acagccggcc 900  
 ctgtgcccag aaaaaaagag gggagggaga agggggtgct cagcctacca ccgggcagg 960

cccagataac actgcagata cccaaatggt aatcacccat tagcacaggc ccagagcaaa 1020  
ggggaaagtg attaggtgta taatgggggt cactgggcag gagcagtggg cttgagcttc 1080  
aaagataaga ggttttcagg ttaatcagca ccctgtggtg tgtggatata aggaagctaa 1140  
cacaggttct tgaagcaaga tcctgag 1167